

From: Peterson, Lance
To: [Sheldrake, Sean](#)
Cc: [BAYUK Dana](#)
Subject: Gasco - Seepage meter data gap investigation oversight - Saturday September 9, 2017
Date: Saturday, September 9, 2017 6:15:02 PM
Attachments: [Proposed seepage meter location map Summer 2017 Sampling Memo.pdf](#)

WORK ACTIVITIES CONDUCTED

Jason Silvertooth from CDM Smith was present to conduct safety and seepage meter data download and retrieval oversight at the Gasco project area from 08:55 to 12:40 hours on Saturday, September 09, 2017. The purpose of the site visit was to perform health and safety oversight of diving activities and in-water work, and monitor work progress. The objective of the work is to deploy seepage meters to evaluate groundwater seepage into the Willamette River adjacent to the Gasco site. The work was performed by NW Natural's contractors Anchor QEA, Coastal Monitoring Associates (CMA), and Research Support Services (RSS). The weather was partly cloudy, with a high of approximately 80 degrees Fahrenheit.

At 08:55 hrs., the CDM Smith representative arrives at the Cathedral Park boat ramp, which is the designated meeting point for the project. Anchor QEA, CMA, and RSS are preparing the boats and GPS for the day's work.

At 09:00 hrs., the safety meeting is conducted by Jason Silvertooth (CDM Smith) and Holly Samaha (Anchor QEA). Also present at the meeting are Bart Chadwick (CMA), Chris Smith (CMA), Alan Sims (CMA), Eric Parker (RSS), Dale Dickenson (RSS), Viktor Gazarian (RSS), and Andrew Muth (RSS). The following topics are discussed during the meeting:

1. The procedure for retrieving and decontaminating the seepage meters is reviewed. All divers and equipment will be checked thoroughly to look for contamination spots before leaving the decontamination zone.
2. Staying hydrated and maintaining adequate nutrition for field work is discussed, in particular on hot days with physical activity.
3. General reminders are provided to maintain vigilance on all safety procedures, and to avoid complacency and urgency to leave on the final day of field work.

At 09:35 hrs., the boat is in place at location GRD-05 (see attached map for proposed locations). The dive flag is raised to position at the top of the A-frame, and Eric Parker (RSS) calls the U.S. Coast Guard, Multnomah County Sherriff, and Willamette River boat traffic to provide notification of diving operations. Communication checks are performed with the diver masks.

At 09:50 hrs., the process of downloading data and collecting the seepage meter at GRD-05 begins.

At 10:40 hrs., the data download is complete and the seepage meter has been retrieved and decontaminated at GRD-05. The boat was reoriented before decontamination so that windblown spray from decontamination is away from the boats. During decontamination procedures, a small spot is observed on the diver's suit, and a thin layer or potential contamination is present on a small portion of the flange of the seepage meter. Both areas of potential contamination are cleaned with

soap, paper towels, and potable water, and a stainless steel scrub brush is used to assist with cleaning the flange. The scrub brush is rinsed with soap and water after decontamination.

At 11:10 hrs., the boat is in place at location GRD-06, and the process of downloading data and collecting the seepage meter at GRD-06 begins.

At 12:00 hrs., the data download is complete and the seepage meter has been retrieved and decontaminated. During decontamination procedures, no visible contamination or sheen is observed. After retrieving the meter, the diver flag was lowered and Eric Parker notifies the U.S. Coast Guard and Willamette River traffic that dive operations are complete.

At 12:40 hrs., CDM Smith and Anchor QEA representatives are off the boat and demobilize from the site. All site operations are complete for the day.

HEALTH AND SAFETY ISSUES

None noted.

ACTIVITIES DISCUSSED

All of the seepage meters have been retrieved, all data has been downloaded, and the field event is complete.

PHOTOS

Refer to previous email sent on 9/9/2017 for photos of decontamination procedures.

Lance Peterson, RG, LHG

CDM Smith 14432 SE Eastgate Way, Suite 100 Bellevue, WA 98007

D: 425-519-8382 **O:** 425-519-8300 **C:** 425-417-5946

peterstone@cdmsmith.com www.cdmsmith.com